What I claim is:

1. A method for the production of soluble HLA molecules in a cell pharm having an appropriate growth media therein, comprising the steps of:

-- isolating HLA allele mRNA from a source and reverse transcribing the mRNA to obtain allelic cDNA;

-- amplifying the allelic cDNA by PCR, wherein the amplification utilizes at least one locus-specific primer having a stop codon incorporated into a 3' primer thereby resulting in a truncated PCR product having the coding regions encoding cytoplasmic and transmembrane domains of the allelic cDNA removed such that the truncated PCR product has a coding region encoding a soluble HLA molecule;

-- inserting the truncated PCR product into a mammalian expression vector to form a plasmid containing the truncated PCR product having the coding region encoding a soluble HLA molecule;

-- electroporating the plasmid containing the truncated PCR product into at least one suitable host cell; and

-- inoculating the cell pharm with the at least one suitable host cell containing the plasmid containing the truncated PCR product such that the cell pharm produces soluble HLA molecules.

2. The method according to claim 1, further comprising the step of harvesting the soluble HLA molecules from the cell pharm.

3. The method according to claim 1 wherein the soluble HLA molecules are Class I HLA molecules or Class II HLA molecules.

4. The method according to claim 1 wherein, in the step of isolating HLA allele mRNA from a source, the source is selected from the group consisting of mammalian DNA and an immortalized cell line.

5. The method according to claim 1 wherein, in the step of inserting the truncated PCR product into a mammalian expression vector, the mammalian expression vector contains a promoter that facilitates increased expression of the truncated PCR product.

6. The method according to claim 1 wherein, in the step of electroporating the plasmid containing the truncated PCR product into at least one suitable host cell, the suitable host cell lacks expression of Class I HLA molecules.

7. A method for the production of soluble HLA molecules in a cell pharm having an appropriate growth media therein, comprising the steps of:

-- isolating HLA allele mRNA from a source and reverse transcribing the mRNA to obtain allelic cDNA;

-- amplifying the allelic cDNA by PCR, wherein the amplification utilizes at least one locus-specific primer that truncates the allelic cDNA, thereby resulting in a truncated PCR product having the coding regions encoding cytoplasmic and transmembrane domains of the allelic cDNA removed such that the truncated PCR product has a coding region encoding a soluble HLA molecule;

-- inserting the truncated PCR product into a mammalian expression vector to form a plasmid containing the truncated PCR product having the coding region encoding a soluble HLA molecule;

-- electroporating the plasmid containing the truncated PCR product into at least one suitable host cell; and

-- inoculating the cell pharm with the at least one suitable host cell containing the plasmid containing the truncated PCR product such that the cell pharm produces soluble HLA molecules.

8. The method according to claim 7, further comprising the step of harvesting the soluble HLA molecules from the cell pharm.

9. The method according to claim 7 wherein the soluble HLA molecules are

Class I HLA molecules or Class II HLA molecules.

10. The method according to claim 7 wherein, in the step of isolating HLA allele mRNA from a source, the source is selected from the group consisting of mammalian DNA and an immortalized cell line.

11. The method according to claim 7 wherein, in the step of amplifying the allelic cDNA by PCR, the locus-specific primer includes a sequence encoding a tail such that the soluble HLA molecule encoded by the truncated PCR product contains a tail attached thereto that facilitates in purification of the soluble HLA molecules produced therefrom.

12. The method according to claim 7 wherein, in the step of inserting the truncated PCR product into a mammalian expression vector, the mammalian expression vector contains a promoter that facilitates increased expression of the truncated PCR product.

13. The method according to claim 7 wherein, in the step of electroporating the plasmid containing the truncated PCR product into at least one suitable host cell, the suitable host cell lacks expression of Class I HLA molecules.

14. A method for the production of soluble HLA molecules in a cell pharm having an appropriate growth media therein, comprising the steps of:

-- isolating HLA allele mRNA from a source and reverse transcribing the mRNA to obtain allelic cDNA;

-- amplifying the allelic cDNA by PCR, wherein the amplification utilizes at least one locus-specific primer that truncates the allelic cDNA, thereby resulting in a truncated PCR product having the coding regions encoding cytoplasmic and transmembrane domains of the allelic cDNA removed such that the truncated PCR product has a coding region encoding a soluble HLA molecule;

-- inserting the truncated PCR product into a mammalian expression vector to form a plasmid containing the truncated PCR product having the coding region encoding a soluble HLA molecule;

-- electroporating the plasmid containing the truncated PCR product into at least one suitable host cell; and

-- inoculating the cell pharm with the at least one suitable host cell containing the plasmid containing the truncated PCR product such that the cell pharm produces soluble HLA molecules, wherein the soluble HLA molecules are folded naturally and are trafficked through the cell in such a way that they are identical in functional properties to an HLA molecule expressed from the HLA allele mRNA

and thereby bind peptide ligands in an identical manner as full-length, cell-surface-expressed HLA molecules.

15. The method according to claim 14, further comprising the step of harvesting the soluble HLA molecules from the cell pharm.

16. The method according to claim 14 wherein the soluble HLA molecules are Class I HLA molecules or Class II HLA molecules.

17. The method according to claim 14 wherein, in the step of isolating HLA allele mRNA from a source, the source is selected from the group consisting of mammalian DNA and an immortalized cell line.

18. The method according to claim 14 wherein, in the step of amplifying the allelic cDNA by PCR, the at least one locus-specific primer is a 3' primer having a stop codon incorporated therein.

19. The method according to claim 14 wherein, in the step of amplifying the allelic cDNA by PCR, the locus-specific primer includes a sequence encoding a tail such that the soluble HLA molecule encoded by the truncated PCR product contains a tail attached thereto that facilitates in

purification of the soluble HLA molecules produced therefrom.

20. The method according to claim 14 wherein, in the step of inserting the truncated PCR product into a mammalian expression vector, the mammalian expression vector contains a promoter that facilitates increased expression of the truncated PCR product.

21. The method according to claim 14 wherein, in the step of electroporating the plasmid containing the truncated PCR product into at least one suitable host cell, the suitable host cell lacks expression of Class I HLA molecules.

22. A method for the production of soluble HLA molecules in a cell pharm having an appropriate growth media therein, comprising the steps of:

-- obtaining gDNA which encodes a HLA allele;

-- amplifying the allelic gDNA by PCR, wherein the amplification utilizes at least one locus-specific primer having a stop codon incorporated into a 3' primer thereby resulting in a truncated PCR product having the coding regions encoding cytoplasmic and transmembrane domains of the allelic gDNA removed such that the truncated PCR product has a coding region encoding a soluble HLA molecule;

-- inserting the truncated PCR product into a mammalian expression vector to form a plasmid containing the truncated PCR product having the coding region encoding the soluble HLA molecule;

-- electroporating the plasmid containing the truncated PCR product into at least one suitable host cell; and

-- inoculating the cell pharm with the at least one suitable host cell containing the plasmid containing the truncated PCR product such that the cell pharm produces soluble HLA molecules.

23. The method according to claim 22, further comprising the step of harvesting the soluble HLA molecules from the cell pharm.

24. The method according to claim 22, wherein the soluble HLA molecules are Class I HLA molecules or Class II HLA molecules.

25. The method according to claim 22, wherein, in the step of obtaining gDNA which encodes a HLA allele, the gDNA is obtained from blood, saliva, hair, semen, or sweat.

26. The method according to claim 22, wherein, in the step of inserting the truncated PCR product into a mammalian expression vector, the

mammalian expression vector contains a promoter that facilitates increased expression of the truncated PCR product.

27. The method according to claim 22, wherein, in the step of electroporating the plasmid containing the truncated PCR product into at least one suitable host cell, the suitable host cell lacks expression of Class I HLA molecules.

28. A method for the production of soluble HLA molecules in a cell pharm having an appropriate growth media therein, comprising the steps of:

-- obtaining gDNA encoding a HLA allele;

-- isolating HLA allele mRNA from gDNA and reverse transcribing the mRNA to obtain allelic cDNA;

-- amplifying the allelic cDNA by PCR, wherein the amplification utilizes at least one locus-specific primer that truncates the allelic cDNA, thereby resulting in a truncated PCR product having the coding regions encoding cytoplasmic and transmembrane domains of the allelic cDNA removed such that the truncated PCR product has a coding region encoding a soluble HLA molecule;

-- inserting the truncated PCR product into a mammalian expression vector to form a plasmid containing the truncated PCR product having the coding region encoding a soluble HLA molecule;

-- electroporating the plasmid containing the truncated PCR product into at least one suitable host cell; and

-- inoculating the cell pharm with the at least one suitable host cell containing the plasmid containing the truncated PCR product such that the cell pharm produces soluble HLA molecules.

29. The method according to claim 28, further comprising the step of harvesting the soluble HLA molecules from the cell pharm.

30. The method according to claim 28, wherein the soluble HLA molecules are Class I HLA molecules or Class II HLA molecules.

31. The method according to claim 28, wherein in the step of obtaining gDNA which encodes a HLA allele, the gDNA is obtained from blood, saliva, hair, semen, or sweat.

32. The method according to claim 28, wherein, in the step of amplifying the allelic cDNA by PCR, the locus-specific primer includes a sequence encoding a tail such that the soluble HLA molecule encoded by the truncated PCR product contains a tail attached thereto that facilitates in purification of the soluble HLA molecules produced therefrom.

33. The method according to claim 28, wherein in the step of inserting the truncated PCR product into a mammalian expression vector, the mammalian expression vector contains a promoter that facilitates increased expression of the truncated PCR product.

34. The method according to claim 28, wherein in the step of electroporating the plasmid containing the truncated PCR product into at least one suitable host cell, the suitable host cell lacks expression of Class I HLA molecules.

35. A method for the production of soluble HLA molecules in a cell pharm having an appropriate growth media therein, comprising the steps of:

-- obtaining gDNA encoding a HLA allele;

-- isolating HLA allele mRNA from gDNA and reverse transcribing the mRNA to obtain allelic cDNA;

-- amplifying the allelic cDNA by PCR, wherein the amplification utilizes at least one locus-specific primer that truncates the allelic cDNA, thereby resulting in a truncated PCR product having the coding regions encoding cytoplasmic and transmembrane domains of the allelic cDNA removed such that the truncated PCR product has a coding region encoding a soluble HLA molecule;

-- inserting the truncated PCR product into a mammalian expression vector to form a plasmid containing the truncated PCR product having the coding region encoding a soluble HLA molecule;

-- electroporating the plasmid containing the truncated PCR product into at least one suitable host cell; and

-- inoculating the cell pharm with the at least one suitable host cell containing the plasmid containing the truncated PCR product such that the cell pharm produces soluble HLA molecules, wherein the soluble HLA molecules are folded naturally and are trafficked through the cell in such a way that they are identical in functional properties to an HLA molecule expressed from the HLA allele mRNA and thereby bind peptide ligands in an identical manner as full-length, cell-surface-expressed HLA molecules.

36. The method according to claim 35, further comprising the step of harvesting the soluble HLA molecules from the cell pharm.

37. The method according to claim 35, wherein the soluble HLA molecules are Class I HLA molecules or Class II HLA molecules.

38. The method according to claim 35, wherein in the step of obtaining gDNA

which encodes a HLA allele, the gDNA is obtained from blood, saliva, hair, semen, or sweat.

39. The method according to claim 35, wherein in the step of amplifying the allelic cDNA by PCR, the at least one locus-specific primer is a 3' primer having a stop codon incorporated therein.

40. The method according to claim 35 wherein, in the step of amplifying the allelic cDNA by PCR, the locus-specific primer includes a sequence encoding a tail such that the soluble HLA molecule encoded by the truncated PCR product contains a tail attached thereto that facilitates in purification of the soluble HLA molecules produced therefrom.

41. The method according to claim 35 wherein, in the step of inserting the truncated PCR product into a mammalian expression vector, the mammalian expression vector contains a promoter that facilitates increased expression of the truncated PCR product.

42. The method according to claim 35 wherein, in the step of electroporating the plasmid containing the truncated PCR product into at least one suitable host cell, the suitable host cell lacks expression of Class I HLA molecules.

43. A multimeric HLA complex, comprising:

-- a substrate; and

-- at least two soluble HLA molecules attached to the substrate.

44. The multimeric HLA complex of claim 43, wherein the multimeric HLA complex is used to test functionality of peptide ligands bound by the at least two soluble HLA molecules.